IN THE CLAIMS:

1. (Currently amended) A system for setting and adjusting a frequency of ~~electrical~~ output pulses derived from an oscillator in a network comprising:

an accumulator module configured to receive input pulses from an oscillator and to ~~output~~ store an accumulated value;

an adjustor module configured to store an adjustor value;

a digital adder configured to add ~~values from the accumulator module and the adjustor module~~ the accumulated value to the adjustor value and to output ~~their~~ the sums sum to the accumulator module, the digital adder further configured ~~and~~ to generate output ~~electrical~~ pulses corresponding to carry values of the sum; and

a logic module configured to receive the ~~electrical~~ output pulses corresponding to the carry values ~~from the adder~~, keep local time based on the output pulses, periodically compare the local time to a global time to calculate drift of the local time relative to the global time, and modify the adjustor value ~~stored in the adjustor module~~ to compensate for the drift.

2. (Original) The system of claim 1, wherein the logic module is operably connected to the network.

3. (Original) The system of claim 2, wherein the network is a downhole network integrated into a tool string.

4. (Original) The system of claim 1, further comprising a source of global time connected to the network.

5. (Original) The system of claim 4 wherein the source of global time is selected from the group consisting of network servers, GPS devices, downhole nodes in the network, and wireless transmitters.

6. (Currently amended) The system of claim 1, wherein the accumulator module is further configured to output ~~its~~ the accumulated value to the digital adder for every ~~pulse it detects~~ input pulse received from the oscillator.

7. (Currently amended) The system of claim 1, wherein the sum ~~stored by the digital adder in~~ output to the accumulator module becomes the accumulated value ~~that is output by the accumulator module~~.

8. (Original) The system of claim 1, wherein the oscillator is selected from the group consisting of at least one crystal, at least one transistor, at least one RC circuit, at least one LC circuit, and at least one LRC circuit.

9. (Currently amended) The system of claim 1, wherein the adjustor module initially stores a value given by a predetermined output pulse frequency divided by the input pulse frequency of the oscillator.

10. (Original) The system of claim 1, wherein the digital adder is configured to store a new sum in the accumulator module for each value it receives from the accumulator module.

11. (Currently amended) The system of claim 1, wherein the ~~system functions as~~ output pulses provide the basis for a baud rate generator for the network.

12. (Cancelled).

13. (Cancelled).

14. (Cancelled).

15. (Currently amended) The system of claim ~~14~~ 1, wherein the logic module is further configured to periodically synchronize the local time to the global time.

16. (Currently amended) A method for ~~producing electrical~~ generating output pulses at a selected frequency comprising:

~~determining an adjustor value from the selected frequency;~~

~~receiving electrical pulses from an oscillator;~~

~~digitally adding an accumulated value to the adjustor value; and~~

~~outputting electrical pulses corresponding to carry values.~~

providing an accumulator module configured to receive input pulses from an oscillator and to store an accumulated value;

providing an adjustor value;

digitally adding the accumulated value to the adjustor value and storing the sum in the accumulator module;

generating output pulses corresponding to carry values of the sum;

keeping local time based on the output pulses;

periodically comparing the local time to a global time to calculate drift of the local time relative to the global time; and

modifying the adjustor value to compensate for the drift.

17. (Currently amended) The method of claim 16, wherein the step of digitally adding an the accumulated value to ~~an~~ the adjustor value occurs for each ~~electrical~~ input pulse received from the oscillator.

18. (Cancelled).

19. (Currently amended) The method of claim ~~18~~ 16, wherein the sum stored in the accumulator module becomes the next accumulated value added to the adjustor value.

20. (Currently amended) The method of claim 16, wherein the adjustor value is initially determined by dividing ~~the~~ a selected output pulse frequency by ~~a~~ an input pulse frequency of the oscillator.

21. (Currently amended) The method of claim 20, wherein the ~~predetermined frequency of output pulses~~ selected output pulse frequency is a multiple of a desired baud rate for data transmission or reception in a network.

22. (Currently amended) The method of claim 21, wherein the ~~predetermined frequency of output pulses~~ selected output pulse frequency is 16 times the desired baud rate for data transmission or reception in a network.

23. (Currently amended) A method for correcting drift in output pulses derived from an oscillator in a network comprising:

determining an adjustor value ~~from~~ corresponding to a selected output pulse frequency;

receiving ~~electrical~~ input pulses from an oscillator;

digitally adding an accumulated value to ~~an~~ the adjustor value to produce a sum;

~~outputting~~ generating ~~electrical~~ output pulses corresponding to carry values of the sum;

keeping local time based on the ~~electrical~~ output pulses; and

modifying the adjustor value to adjust the frequency of the ~~electrical~~ output pulses.

24. (Currently amended) The method of claim 23, wherein the step of digitally adding ~~an~~ the accumulated value to ~~an~~ the adjustor value occurs for each ~~electrical~~ input pulse received from the oscillator.

25. (Currently amended) The method of claim 23, wherein the step of digitally adding ~~an~~ the accumulated value to ~~an~~ the adjustor value further comprises storing the sum in an accumulator module.

26. (Original) The method of claim 25, wherein the sum stored in the accumulator module becomes the next accumulated value added to the adjustor value.

27. (Currently amended) The method of claim 23, wherein the adjustor value is initially determined by dividing the selected output pulse frequency by a an input pulse frequency of the oscillator.

28. (Currently amended) The method of claim 23, ~~wherein the method further comprises the step of~~ further comprising comparing the local time to a global time received over the network to calculate the oscillator drift.

29. (Currently amended) The method of claim 28, wherein the steps of receiving ~~electrical~~ input pulses from an oscillator, digitally adding ~~an~~ the accumulated value to ~~an~~ the adjustor value, ~~outputting~~ generating ~~electrical~~ output pulses corresponding to carry values of the sum, and keeping local time based on the output pulses are repeated at least once before calculating ~~local~~ the oscillator drift.

30. (Currently amended) The method of claim 28, wherein the global time ~~data are~~ is adjusted for transmission latency over the network from the source of the global time.

31. (Currently amended) The method of claim 28, wherein the local time is compared to the global time after ~~having synchronized~~ synchronizing the local ~~clock~~ time to the ~~source of~~ global time.

32. (Currently amended) The method of claim 28, wherein ~~the modified~~ modifying the adjustor value further comprises determining a ~~and~~ frequency of ~~its~~ modification of the adjustor value ~~are determined from~~ based on the calculated oscillator drift.